



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,664	02/23/2006	Tetsuo Nagano	P27709	1923
7055 7590 05/14/2009 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER MOSS, KERI A				
ART UNIT 1797		PAPER NUMBER		
NOTIFICATION DATE 05/14/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com

pto@gbpatent.com

### Office Action Summary

**Application No.**

10/531,664

**Applicant(s)**

NAGANO ET AL.

**Examiner**

KERI A. MOSS

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2 and 3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicants' amendment filed April 9, 2009 is hereby acknowledged. Claims 2-3 are pending.

***Response to Amendment***

2. The rejection of claim 3 as indefinite has been withdrawn in light of applicants' arguments.
3. The rejection of claims 1-3 as anticipated by Nagano has been withdrawn in light of applicants' amendments and arguments.
4. The rejection of claims 1-3 as obvious in view of Nagano has been maintained and modified to include evidence of Aldini et al.
5. The double patenting rejections have been maintained.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano (WO01/64664) as evidenced by Aldini et al. (US 2002/0182736 A1). Examiner acknowledges that WO01/64664 is published in Japanese. Examiner assumes that the English version of WO01/64664 in the form of EP 1 260 508 A1 is a direct translation of WO01/64664 and therefore examiner references the EP publication. Nagano compounds ss-1F and ss-3F anticipate the compounds HPF and APF, respectively, of Formula (I) as claimed in claims 2 and 3. Nagano further teaches reacting ss-1F and ss-

3F with a reactive oxygen species and measuring fluorescence of a dephenylated compound produced by this reaction (claim 13). Nagano does not disclose a specific example using ss-1F or ss-3F to measure peroxyntirites. However, Nagano teaches that "[t]he types of reactive oxygens which are measurable by the agent of the present invention are not particularly limited." ([0020]). It is well known among those with ordinary skill in the art that peroxyntirite ion contains reactive oxygen, as evidenced by Aldini et al. Aldini et al. teaches that peroxyntirite is considered a reactive oxygen species ([0046] and [0048]). Since Nagano teaches the ability of ss-1F and ss-3F to measure unlimited types of reactive oxygen species, and since peroxyntirite is a reactive oxygen species, one of ordinary skill in the art would expect that compounds ss-1F and ss-3F would measure peroxyntirite ion with a reasonable likelihood of success.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 2-3 are is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5 and 13-14 of U.S. Patent No. 7,087,766 as evidenced by Aldini et al. (US 2002/0182736). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '766 compounds ss-1F and ss-3F anticipate the compounds HPF and APF, respectively, of Formula (I) as claimed in claims 2 and 3.

Regarding the method claim 3, one of ordinary skill in the art would expect that the compounds of '766 to react with reactive oxygen species other than the expressed examples, including the reactive oxygen species peroxynitrite ion. Regarding '766 patent claims 5 and 13-14, '766 does not expressly provide an example using ss-1F or ss-3F to measure peroxynitrites ion. However, Nagano discloses a method for measuring reactive oxygen using compounds ss-1F and ss-3F and teaches that "[t]he types of reactive oxygens which are measurable by the agent of the present invention are not particularly limited." ([0020]). It is well known among those with ordinary skill in the art that peroxynitrite ion contains reactive oxygen, as evidenced by Aldini et al. ([0046], [0048]). Therefore, one of ordinary skill in the art would expect that compounds ss-1F and ss-3F would measure peroxynitrite ion with a reasonable likelihood of success.

10. Claims 2-3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 7,378,282 as evidenced by Aldini et al. (US 2002/0182736). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '282 patent discloses the compounds of instantly claimed formula I used for measuring reactive oxygen species, a group which is known to include peroxynitrite, as evidenced by Aldini et al., supra ([0046], [0048]).

#### ***Response to Arguments***

11. Applicant's arguments, see Amendment, filed April 9, 2009, with respect to the rejections under 35 U.S.C 112, 2<sup>nd</sup> paragraph and 35 U.S.C. 102(b) have been fully considered and are persuasive. The rejections have been withdrawn.

12. Applicant's arguments filed April 9, 2009 have been fully considered but they are not persuasive.

13. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the ability of the instantly claimed compounds to distinguish ONOO from NO and superoxide) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Examiner notes that Applicants are claiming a method for measuring peroxynitrite, not a method for distinguishing peroxynitrite from other reactive oxygen species. The

Examiner has demonstrated that the compounds of Nagano would be capable of measuring peroxynitrite and thus has met the claim language. Whether Nagano's compounds measure other compounds as well does not disprove the ability of these compounds to measure peroxynitrite.

14. Applicants argue that Nagano does not teach the desirability of measuring peroxynitrites. The Examiner has addressed this argument by supplying evidence of Aldini et al. that peroxynitrite is a well known reactive oxygen species and thus Nagano teaches the desirability of measuring peroxynitrite with Nagano's disclosed compounds.

15. Applicants argue that the '766 and the '282 patent do not suggest the desirability of measuring peroxynitrites with the disclosed compounds. Aldini et al. provides evidence that it is well known among those with ordinary skill in the art that peroxynitrite is a reactive oxygen species and thus would be a desirable species to measure using the compounds of the '766 and '282 patents.

### ***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KERI A. MOSS whose telephone number is (571)272-8267. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571)272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Keri A. Moss/  
Examiner, Art Unit 1797

/Vickie Kim/



Application/Control Number: 10/531,664

Page 8

Art Unit: 1797

Supervisory Patent Examiner, Art Unit 1797